NOTES ON TWO NEW HETEROMORPHIC DEUTONYMPHS (HYPOPI) (ACARINA : SARCOPTIFORMES)

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Synopsis

Two new hypopi are described : *Anoetostoma domrowi*, n. sp., from a small fly, *Scoliophthalmus* sp., from New Guinea, and *Marsupiopus trichosuri*, n. g., n. sp., from a marsupial, *Trichosurus vulpecula*, from the Australian Capital Territory.

The two new heteromorphic nymphs (hypopi) described below were kindly sent to me by Mr. R. Domrow, Queensland Institute of Medical Research, Brisbane.

They belong to two different families of Acaridiae. One, from a fly, is a new species of Anoetidae, but the second, from a marsupial, is more difficult to classify because of its very aberrant characters. It represents a new genus and species. Further, as it is not possible to place it in any known group of hypopi, I propose a new subfamily within the Glycyphagidae for its inception.

The holotype of each of these two new species is in the Australian National Insect Collection, C.S.I.R.O., Canberra, with paratypes in the Queensland Museum, Brisbane, the South Australian Museum, Adelaide, and the collection of the author.

Family Anoetidae

Genus Anoetostoma Womersley

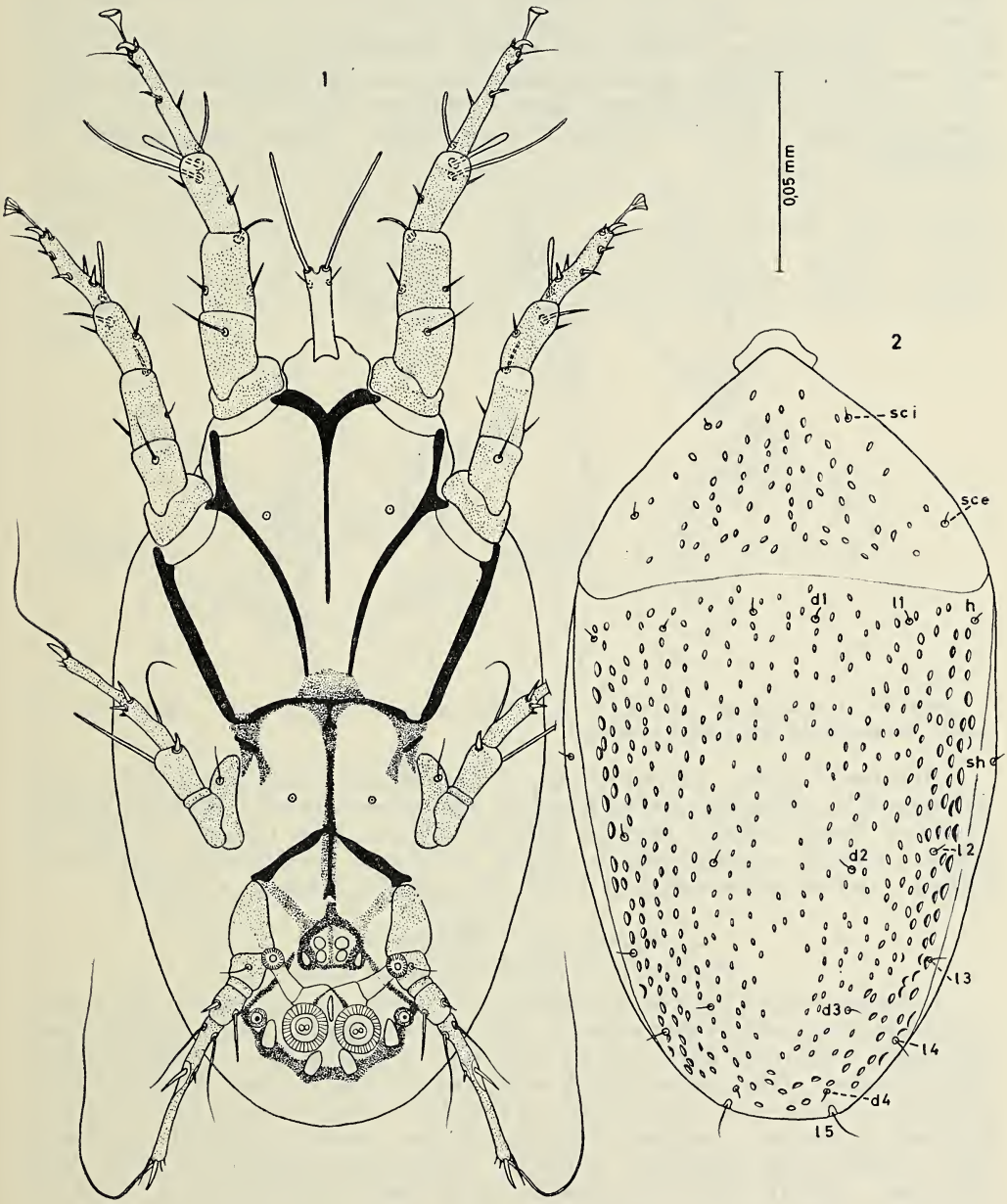
Anoetostoma domrowi, n. sp.

This species does not fit exactly into any described anoetid genus, but it is assigned provisionally to *Anoetostoma*. It resembles *A. oudemansi* Womersley, the only known species (Scheucher, 1957 ; Hughes and Jackson, 1958), in having coxae I and III without setae or discs (small circles, representing vestigial setae, are, however, present) ; rather long legs ; all tarsi ending in a claw ; tarsi III and IV with a long, simple, subapical seta ; a small disc on each side of the vulva ; and the cuticle of the dorsum coarsely granular. However, it differs from that species in many characters : body more elongate ; well-developed sejugal furrow present ; dorsal cuticle with pits elongate and fewer in number ; ten discs on suctorial plate ; legs III and IV equal ; sternum and epimera II much longer ; and epimerites II fused posteriorly with epimera III.

This species is named after Mr. Domrow, who kindly sent me this interesting material.

Deutonymph (holotype) (Figs. 1-6) : Idiosoma 180μ long, 96μ wide, and four paratypes 174 × 98μ, 177 × 93μ, 181 × 96μ, 186 × 96μ. Dorsum with well-formed sejugal furrow. Dorsal cuticle with numerous small pits, all longer than wide. Gnathosoma 22μ long, 4-5μ wide. Sternum 42μ long. Epimera II almost

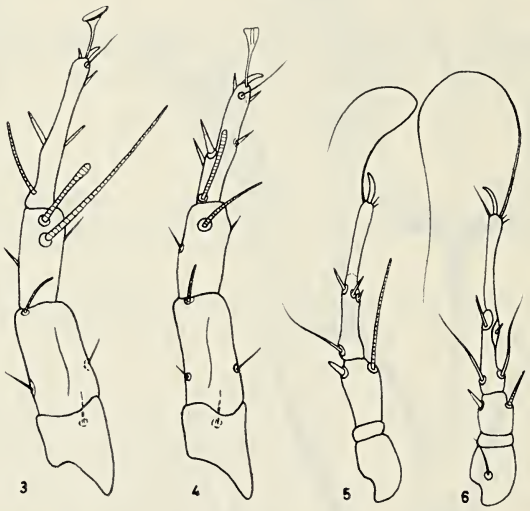
reaching epimeral bridge formed by fusion of epimera III. Suctorial plate with five pairs of discs ; anterior pair with very faint radial striations, borne on elongated bases which may be protruded some distance ; median pair much



Figs 1-2. *Anoetostoma domrowi*, n. sp. Heteromorphic deutonymph. Ventral and dorsal views, respectively.

larger, also with radial striation ; two pairs set posterolaterally, more or less conical, and without striation ; remaining (exteriormost) pair obsolescent. Vulva with two pairs of genital suckers, flanked on each side by small, more or less conical, non-striate disc.

Chaetotaxy : Dorsal setae thin and very short (mostly 4-5μ long), comprising *sc i*, *sc e*, *h*, *sh*, *d 1* to *d 4*, *l 1* to *l 5*, of which *l 5* reach 10μ. I could not see *d 5*, and *sh* is ventrolateral. Gnathosoma with one pair of long solenidia (34μ) and one pair of short setae. Tarsi I and II each with leaf-like terminal seta, that on tarsus I somewhat sucker-like. Number of setae on tarsi I to IV (excluding solenidia) 6-7-7-8 ; tibiae 2-2-1-1 ; genua 2-2-0-0 ; femora 1-1-0-1 ; trochanters 0-0-1-0. *Solenidiotaxy* : Tarsi I and II each with one basal solenidion. Tibia I with two distal solenidia (one club-shaped, one strongly attenuated apically) ; tibia II with one well-developed, distal solenidion ; tibia III with long, distal solenidion (25μ) ; tibia IV with shorter solenidion. Genua I and II with one solenidion.



Figs 3-6. *Anoetostoma domrowi*, n. sp. Heteromorphic deutonymph. Legs I, II, III and IV, respectively (tarsi-femora only).

Host and locality : All the specimens were attached around the base of the abdomen of a small fly, *Scoliophthalmus* near *micans* Lamb., Butemu Village, Finisterre Range (4200′), Madang Central District, New Guinea, x. 1964, R. Pullen. The fly was identified by Dr. B. H. Cogan, British Museum (Natural History), and the mites noted by Dr. D. H. Colless, C.S.I.R.O., Canberra.

Family Glycyphagidae

Subfamily Marsupiopinae, n. subf.

Definition (based only on heteromorphic deutonymph) : Sucker-like organs on opisthosoma considerably reduced, with suctorial plate lacking and only two very small sucker-like discs (one on each side of genital slit). Genital suckers well-developed. Gnathosoma short, wide, and divided into two rounded lobes ; with two pairs of setae and one pair of solenidia. Cuticle finely and uniformly punctate in mature specimens. Sejugal furrow poorly developed or absent. Legs I and II well developed, ending in strong claw mounted on rather long pretarsus. Legs III and IV directed forwards, short, but rather thick ; without claws. Tarsi III and IV with several short, strong spines, and two long, subterminal hairs. Trochanters III and IV each with very strong, forwardly directed ventral process, which probably serves to retain mite in hair-follicle, which seems to be its normal biotope. Posterior trochanters extended internally by large sclerites. Epimera I and II normally developed. Epimera III and IV poorly sclerotized. Anus absent.

Chaetotaxy : *v i*, *v e*, *s cx*, *sc i*, *sc e*, *h*, *sh*, *d 1* to *d 4*, *l 1* to *l 5*, *cx I*, *g a* (very short and thin) and *g m* present. Setae *g p* and *d 5* absent. Setae *cx III* repre-

sented by small sclerotized circles. Tarsi 8-9-8-8 ; tibiae 2-2-1-1 ; genua 2-2-1-0 ; femora 1-1-0-0 ; trochanters 1-1-1-0. *Solenidia* : Tarsi 2-1-0-0 ; tibiae 1-1-1-1 ; genua 1-1-0-0.

Type genus : *Marsupiopus*, n. g.

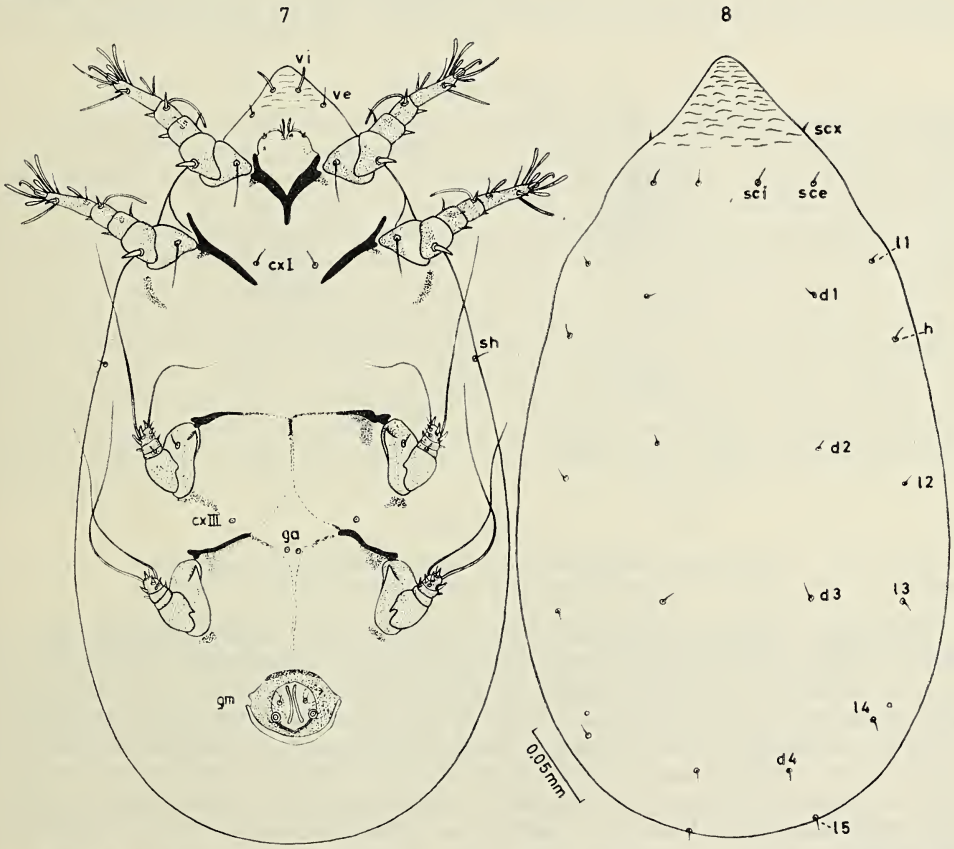
Genus MARSUPIOPUS, n. g.

Definition : As for the subfamily.

Type species : *Marsupiopus trichosuri*, n. sp.

MARSUPIOPUS TRICHOSURI, n. sp.

Deutonymph (holotype) (Figs. 7-12) : Idiosoma 430μ long, 240μ wide, and three paratypes 400 × 220μ, 395 × 210μ, 340 × 190μ. Body ovoid, with anterior extremity conical and more or less snout-like. Cuticle, in mature specimens, finely punctate except on anterior " snout " area, and laterally and ventrally behind genital region. Epimera I fused into short sternum. Epimera II and IV free. Epimera III thin, poorly sclerotized and united in midline. Genital area surrounded by sclerotized, punctate ring, which is heavier along its anterior margin.



Figs 7-8. *Marsupiopus trichosuri*, n. sp. Heteromorphic deutonymph. Ventral and dorsal views, respectively.

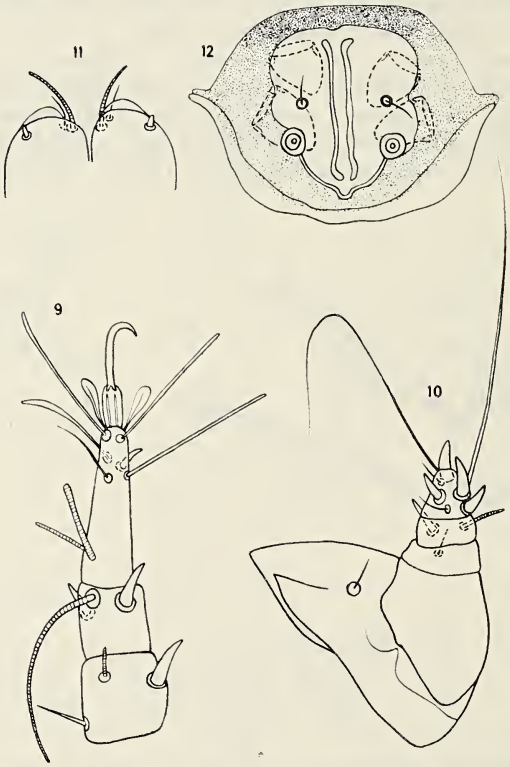
Chaetotaxy of legs consisting mainly of strong, but short spines (modified setae) except on anterior tarsi, which bear only one spine.

Other characters as defined above in subfamilial definition.

Host and locality : In the hair follicles of an adult brush-tailed possum, *Trichosurus vulpecula* (Kerr) (Phalangeridae), Weetangera Road, Australian

Capital Territory, 28. x. 1958, A. L. Dyce. The mange resulting from this infestation was rare in the A.C.T., and was not noted at all in one population studied. It was limited to the tail, except for a small patch on each ear, and was quite conspicuous by spotlight at night.

Remarks : The pilicolous habit of some hypopi was first noted by Fain (1965, 1967), who raised the genus *Rodentopus* for two species from rodents. These hypopi are characterized by the complete absence of suckers on the opisthosoma and the curious modification of the posterior legs. The fixation organs on these latter consists mainly of modified setae, which aid in attachment to the fur.



Figs 9-12. *Marsupiopus trichosuri*, n. sp. Heteromorphic deutonymph. 9, Leg I in dorsal view ; 10, Leg III in ventral view ; 11, Gnathosoma ; 12, Genital area.

The new hypopus described above (*Marsupiopus*) thus resembles that of *Rodentopus* both in biological and in morphological characters. Both live in the hair follicles, although in rather different hosts (a rodent *versus* a marsupial), and both show a drastic reduction of the opisthosomal suckers and a modification of the posterior legs. But in spite of these resemblances, which may perhaps be explained by convergence, I think these hypopi belong to two different groups. The structure of the posterior legs, of the gnathosoma and of the ventral genital plate differ basically in these two species, and justify their separation into different sub-families.

References

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